

Metastatic Adenocarcinoma lung Mimicking Spinal Tuberculosis (Pott's disease) in a female Presenting with Spinal Cord Compression



Medical Science

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ABSTRACT

Spinal tuberculosis is common in India and adenocarcinoma of the lung is also rising in incidence. Clinically, it is sometimes difficult to distinguish an infection of the spine from a metastasis. Similar presentations, with unknown primary, clinical findings and haematological investigations rarely conclude a true diagnosis. We report a case of a 45-year-old female with spinal metastasis from adenocarcinoma lung who was initially misdiagnosed as having spinal tuberculosis. The diagnosis of tumour was made on the basis of intraoperative findings and confirmed by histopathology. Biopsy is mandatory whenever in doubt or patient is not responding with provisional treatment. This case highlights the importance of awareness of the different radiographic features of spinal tuberculosis and spinal malignancy which mimic each other. In order to avoid delayed diagnosis, orthopaedic surgeon, pathologists and radiologists must be aware of features of spinal tuberculosis and spinal malignancies which may interfere with one another.

INTRODUCTION

Tuberculosis remains one of the most important infectious diseases and its incidence is very high in India. Tuberculosis of the skeletal system is frequently located in the spine, a condition known as, "Pott's disease". The spine, pelvis, femur, ribs and skull are the most frequently involved region for bone metastasis. Systemic manifestations of lung cancer are present in more than 50% of cases at diagnosis and 10-15% of lung cancers are detected incidentally in the asymptomatic patients via chest radiographs. However, the distinction in imaging studies between tuberculosis and metastasis of the spine can be very difficult. As we are in an endemic area for tuberculosis, it is common practice that anti tuberculous drug is prescribed for the suspected cases of Potts disease based on the clinical presentation and MRI without histology confirmation.

Here, we report a case of a 45-year-old female with metastatic adenocarcinoma lung that was initially misdiagnosed as Pott's disease. The diagnosis of tuberculosis was made on the basis of intraoperative findings and confirmed by histopathology

CASE REPORT

A 45-year-old female presented with back pain and bilateral lower limb weakness for six months. The pain was pricking in nature, localized in the lower back region, deep seated with no specific aggravating and relieving factors. The pain disturbed her sleep at night and affected her day to day activities. The weakness of the both lower limbs worsened as she became home-bound and it was associated with numbness of the limbs. she had neither tuberculosis infection nor any history of contact with tuberculosis patients. No evidence of abdominal swelling or difficulty in micturition was present. family history of carcinoma of the lung was negative and she was a nonsmoker.

Clinically, she looked pale, non cachexic and neurological examination of lower limbs revealed absence of the motor power and brisk reflexes bilaterally with reduced sensation from T7 level downward. Other system examination was found to be normal.

Investigations showed her hemoglobin to be 7 g/dl with a normal white cell count. Erythrocyte sedimentation rate (ESR) was 103 mm/hour and the Mantoux test was reactive.

Radiograph of the thoracolumbar spine showed a collapse vertebral body of T7. Magnetic Resonance Imaging (MRI) of the thoracolumbar spine (figure 1) was suggestive of an infective process of T6 to T8 with large paravertebral mass. She was treated as spinal tuberculosis with empirical anti-tuberculosis drugs.

However, she did not respond to therapy and a computerized

tomography (CT) guided biopsy of the paravertebral mass was performed. CT scans of the thorax revealed peripherally located speculated right lower lobe lesion consistent with lung carcinoma. Histopathology examination of the mass was consistent with adenocarcinoma of the lung. (figure2)



Figure 1 : MRI Showing an infective process from T6 to T8 with a large paravertebral mass

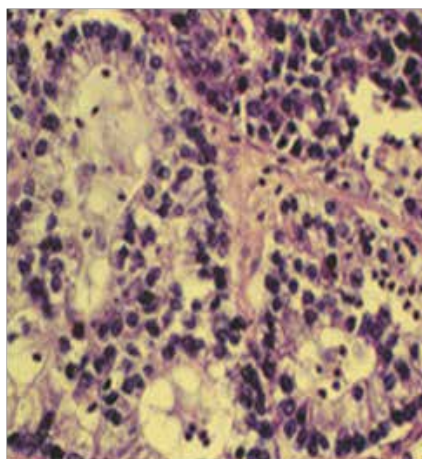


Figure 2 : Metastatic Adenocarcinoma Lung

DISCUSSION

Tuberculosis is still an important infectious disease in many

parts of the world. It is known that tuberculosis can mimic several different clinical pictures. Therefore, it is very important that clinicians increase their awareness of tuberculosis and characteristic manifestations. Pott's disease represents the most common form of spinal tuberculosis. Tuberculous spondylitis usually presents as mass lesions with little evidence of systemic illness. Extension of the infection from the vertebrae into the adjacent soft tissue to form paravertebral or epidural masses is commonly observed. The clinical symptoms of spinal tuberculosis are usually insidious, such as back pain, fever, paraparesis, sensory disturbance, and bladder dysfunction. All these symptoms may be interpreted as stemming from an underlying paravertebral mass. Among the types of vertebral osteomyelitis, a relatively longer mean diagnostic delay is observed in spinal tuberculosis. Since the signs and symptoms are not specific, this disease may be easily misdiagnosed as other disorders. In the majority of cases, the diagnosis of spinal tuberculosis was confirmed by radiological characteristic findings after clinical suspicion. The diagnosis of spinal tuberculosis on MRI depends on the presence of paravertebral abscess and the involvement of contiguous vertebrae and intervening discs. But MRI findings may not be sufficiently diagnostic for tuberculosis in some cas-

es. Pathological examination is the gold standard for definitive diagnosis. Huang et al, reported a case of primary non-Hodgkin lymphoma originating from a lumbar vertebra that was initially misdiagnosed as tuberculous spondylitis. They reported that radiological and clinical examination led them to the diagnosis of spinal TB, and they treated their patient with antituberculous therapy. However, after failing to respond to antituberculous therapy, their patient underwent spinal cord decompression and lesion biopsy, and was finally diagnosed with non-Hodgkin lymphoma. Because a variety of unusual lesions have radiological features similar to paravertebral tumors, in the case of a paravertebral mass, a diagnosis other than malignant tumor should be considered, including tuberculosis, especially in endemic areas.

CONCLUSION

In conclusion, this case highlights the importance of being aware that spinal tuberculosis has many different radiographic features and can mimic a spinal malignancy. In order to avoid delayed diagnosis, orthopaedic surgeons, pathologists and radiologists must be aware of spinal tuberculosis, which may interfere with other clinical conditions especially malignancies prone to metastasize to vertebrae.

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